

WHAT IS CLAIMED IS:

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1. A method of screening drug candidates comprising:
- a) providing a cell that expresses an expression profile gene selected from the group selected of Egr-1, Egr-2, Nur77, c-myc, MIP-1a, MIP-1b, BL34, gfi-1, NAB2, neurogranin, SLAP, A1, E2-20K, SATB1, Cctq, kappa V, pcp-4, TGIF, CD83, ApoE, Aeg-2, CD72, cyclin D2, lck, MEF-2C, bmk/IgD, Evi-2, vimentin, CD36, c-fes, c-fos, TRAP, hIP30, Ly6E.1, LRG-21, Fos B, gadd153, mafK, Ah-R, C/EBP beta, EZF, TIS7, TIS11, TIS11b, LSIRF, MKP1, PAC-1, PEP, MacMARCKS, SNK, Stra13, kir/gem, EB12, IL1-R2, MyD116, RP105, uPAR, 4F2, hRab30, Id3, BKLF, LKLF, EFP, bcl-3, caspase 2, GILZ, hIFI-204, hRhoH, TRAF5, LT-beta, IFNg-RII, gadd45, CDC47, NAG, scd2, kappa 0 ig, iap38, G7e, B29, and SCD2;
- b) adding a drug candidate to the cell; and
- c) determining the effect of the drug candidate on the expression of the expression profile gene.
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2. A method according to claim 1 wherein the determining comprises comparing the level of expression in the absence of the drug candidate to the level of expression in the presence of the drug candidate.
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3. A method according to claim 1 wherein the cell expresses an expression profile gene set of at least one expression profile gene, and the effect of the drug candidate on the expression of the set is determined.
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4. A method according to claim 3 wherein the set comprises a tolerance set comprising carb an h, IgD, CD72, SATB1, ApoE, CD83, cyclin D2, Cctq, MEF-2C, TGIF, Aeg-2, Egr-1, lck, Egr-2, E2-20K, pcp-4, kappa V, neurogranin, NAB2, gfi-1 hIP-30, TRAP, bmk, CD36, Evi-2, vimentin, Ly6E.1, and c-fes.
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5. A method according to claim 4 wherein the expression of hIP-30, TRAP, bmk, CD36, Evi-2, and c-fes are decreased and the expression of carb an h II, CD72, SATB1, ApoE, CD83, cyclin D2, Cctq, MEF-2C, TGIF, Aeg-2, Egr-1, lck, Egr-2, E2-20K, pcp-4, kappa V, neurogranin, NAB2, gfi-1 are increased as a result of the introduction of the drug candidate.

1 6. A method according to claim 3 wherein the set comprises a
2 stimulation set comprising Egr-1, Egr-2, NAB2, mafK, LRG-21, c-fos, c-myc, Stra13,
3 AhR, gadd153, C/EBP beta, TIS11b, TIS11, gfi-1, EZF, Nur77, LSIRF, SNK, PAC-1,
4 kir/gem, MacMARCKS, PEP, MKP1, hRab30, MIP-1b, MIP-1a, EB12, BL34, IL1-R2,
5 TIS7, MyD116, A1, uPAR, RP105, Evi-2 4F2, CD72, Id3, BKLF, LKLF, EFP, Stat1,
6 bcl-3, hRhoH, TRAF5, SLAP, LT-beta, IFNg-RII, GILZ, Caspase 2, gadd45, CDC47,
7 NAG, scd2, kappa 0 ig, B29, iap38, G7e, and hIFI-204.

1 7. A method according to claim 6 wherein the expression of Id3,
2 BKLF, LKLF, EFP, Stat1, bcl-3, hRhoH, TRAF5, SLAP, LT-beta, IFNg-RII, GILZ,
3 Caspase 2, gadd45, CDC47, NAG, scd2, kappa 0 ig, B29, iap38, G7e, and hIFI-204 are
4 decreased and the expression of Egr-1, Egr-2, NAB2, mafK, LRG-21, c-fos, c-myc,
5 Stra13, AhR, gadd153, C/EBP beta, TIS11b, TIS11, gfi-1, EZF, Nur77, LSIRF, SNK,
6 PAC-1, kir/gem, MacMARCKS, PEP, MKP1, hRab30, MIP-1b, MIP-1a, EB12, BL34,
7 IL1-R2, TIS7, MyD116, A1, uPAR, RP105, Evi-2 4F2, CD72 are increased as a result of
8 the introduction of the drug candidate.

1 8. A method according to claim 3 wherein the set comprises an
2 immunosuppression set comprising hIFI-204, hRhoH, caspase 2, B29, SLAP, NAG,
3 iap38, gadd45, BKLF, G7e, Id3, scd2, GILZ, Stat1, kappa 0 ig, LT-beta, LKLF, IFNg-
4 RII, mCDC47, EFP, TRAF5, and bcl-3.

1 9. A method according to claim 8 wherein the expression of hIFI-204,
2 hRhoH, caspase 2, B29, SLAP, NAG, iap38, gadd45, BKLF, G7e, Id3, scd2, GILZ, Stat1,
3 kappa 0 ig, LT-beta, LKLF, IFNg-RII, mCDC47, EFP, TRAF5, and bcl-3 are decreased
4 and the expression of LSIRF, kir/gem, MKP1, hRab30, AhR, c-myc, IL1-R2, TIS11b, Evi-
5 2, A1, EB12, MyD116, MacMARCKS, MIP-1b, MIP-1a, PEP, CD72 are increased as a
6 result of the introduction of the drug candidate.

1 10. A method according to claim 8 wherein the immunosuppressive set
2 further comprises c-fos, gadd153, EZF, C/EBP beta, Stra13, NAB2, mafK, and LRG-21.

1 11. A method according to claim 10 wherein the expression of c-fos,
2 gadd153, EZF, C/EBP beta, Stra13, NAB2, mafK, and LRG-21 are increased as a result
3 of the introduction of the drug candidate.

12. A method of screening for a bioactive agent capable of binding to a B lymphocyte modulator protein (BLMP), the method comprising combining the BLMP and a candidate bioactive agent, and determining the binding of the candidate agent to the BLMP.

13. A method according to claim 11 wherein the BLMP is selected from the group consisting of Egr-1, Egr-2, Nur77, c-myc, MIP-1a, MIP-1b, BL34, gfi-1, NAB2, neurogranin, SLAP, A1, E2-20K, SATB1, Cctq, kappa V, pcp-4, TGIF, CD83, ApoE, Aeg-2, CD72, cyclin D2, lck, MEF-2C, bmk, IgD, Evi-2, vimentin, CD36, c-fes, c-fos, TRAP, hIP30, Ly6E.1, LRG-21, Fos B, gadd153, mafK, Ah-R, C/EBP beta, EZF, TIS7, TIS11, TIS11b, LSIRF, MKP1, PAC-1, PEP, MacMARCKS, SNK, Stra13, kir/gem, EB12, IL1-R2, MyD116, RP105, uPAR, 4F2, hRab30, Id3, BKLF, LKLF, EFP, bcl-3, caspase 2, GILZ, hIFI-204, hRhoH, TRAF5, LT-beta, IFNg-RII, gadd45, CDC47, NAG, scd2, kappa 0 ig, iap38, G7e, B29, and SCD2.

14. A method for screening for a bioactive agent capable of modulating the activity of a B lymphocyte modulator protein (BLMP), the method comprising combining the BLMP and a candidate bioactive agent, and determining the effect of the candidate agent on the bioactivity of the BLMP.

15. A method according to claim 13 wherein the BLMP is selected from the group consisting of Egr-1, Egr-2, Nur77, c-myc, MIP-1a, MIP-1b, BL34, gfi-1, NAB2, neurogranin, SLAP, A1, E2-20K, SATB1, Cctq, kappa V, pcp-4, TGIF, CD83, ApoE, Aeg-2, CD72, cyclin D2, lck, MEF-2C, bmk, IgD, Evi-2, vimentin, CD36, c-fes, c-fos, TRAP, hIP30, Ly6E.1, LRG-21, Fos B, gadd153, mafK, Ah-R, C/EBP beta, EZF, TIS7, TIS11, TIS11b, LSIRF, MKP1, PAC-1, PEP, MacMARCKS, SNK, Stra13, kir/gem, EB12, IL1-R2, MyD116, RP105, uPAR, 4F2, hRab30, Id3, BKLF, LKLF, EFP, bcl-3, caspase 2, GILZ, hIFI-204, hRhoH, TRAF5, LT-beta, IFNg-RII, gadd45, CDC47, NAG, scd2, kappa 0 ig, iap38, G7e, B29, and SCD2.

16. A method of evaluating the effect of an immunosuppressive drug comprising:

- a) administering the drug to a patient;
- b) removing a cell sample from the patient; and
- c) determining the expression profile of the cell sample.

1 17. A method according to claim 16 further comprising comparing the
2 expression profile to an expression profile of a healthy individual.

1 18. A method according to claim 16 wherein the expression profile
2 includes at least one gene selected from the group consisting of Egr-1, Egr-2, Nur77, c-
3 myc, MIP-1a, MIP-1b, BL34, gfi-1, NAB2, neurogranin, SLAP, A1, E2-20K, SATB1,
4 Cctq, kappa V, pcp-4, TGIF, CD83, ApoE, Aeg-2, CD72, cyclin D2, lck, MEF-2C, bmk,
5 IgD, Evi-2, vimentin, CD36, c-fes, c-fos, TRAP, hIP30, Ly6E.1, LRG-21, Fos B,
6 gadd153, mafK, Ah-R, C/EBP beta, EZF, TIS7, TIS11, TIS11b, LSIRF, MKP1, PAC-1,
7 PEP, MacMARCKS, SNK, Stra13, kir/gem, EB12, IL1-R2, MyD116, RP105, uPAR,
8 4F2, hRab30, Id3, BKLF, LKLF, EFP, bcl-3, caspase 2, GILZ, hIFI-204, hRhoH,
9 TRAF5, LT-beta, IFNg-RII, gadd45, CDC47, NAG, scd2, kappa 0 ig, iap38, G7e, B29,
10 and SCD2.

1 19. An array of probes, comprising a support bearing a plurality of
2 nucleic acid probes complementary to a plurality of mRNAs fewer than 1000 in number,
3 wherein the plurality of mRNA probes includes an mRNA expressed by a gene selected
4 from the group consisting of Egr-1, Egr-2, Nur77, c-myc, MIP-1a, MIP-1b, BL34, gfi-1,
5 NAB2, neurogranin, SLAP, A1, E2-20K, SATB1, Cctq, kappa V, pcp-4, TGIF, CD83,
6 ApoE, Aeg-2, CD72, cyclin D2, lck, MEF-2C, bmk, IgD, Evi-2, vimentin, CD36, c-fes,
7 c-fos, TRAP, hIP30, Ly6E.1, LRG-21, Fos B, gadd153, mafK, Ah-R, C/EBP beta, EZF,
8 TIS7, TIS11, TIS11b, LSIRF, MKP1, PAC-1, PEP, MacMARCKS, SNK, Stra13,
9 kir/gem, EB12, IL1-R2, MyD116, RP105, uPAR, 4F2, hRab30, Id3, BKLF, LKLF, EFP,
10 bcl-3, caspase 2, GILZ, hIFI-204, hRhoH, TRAF5, LT-beta, IFNg-RII, gadd45, CDC47,
11 NAG, scd2, kappa 0 ig, iap38, G7e, B29, and SCD2.

1 20. The array of claim 19, wherein the probes are cDNA sequences.

1 21. The array of claim 19, comprising a plurality of sets of probes,
2 each set of probes complementary to subsequences from a mRNA.